# A new method of adjusting spatial and temporal biases for selected climate variables.

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Climate models is a valuable source of data for climate change impact studies. Often, the climate model data cannot be used in their native form due to the presence of biases. The lack of an appropriate adjustment of climate forcings may even lead to unrealistic model results. Many methodologies of bias adjustment have been developed and can be found in the literature dealing with the temporal biases in the time-series. Their main task is to adjust the temporal statistical properties of climate simulations for a single point value to resemble those of observations in a common climate period. However, they do not adjust or retain the spatial patterns of the data with respect to the observational datasets. In cases where impact models are sensitive to the spatial distribution of the variables, the adjustment of the spatial patterns is equally or more important to the adjustment of the temporal statistics. Examples of such impact models are cyclone tracking schemes or coastal flooding models that consider the spatial structure of wind and/or atmospheric pressure data. Here we develop a method to deal with this type of biases in space, along with the temporal biases. The methodology considers correction in the entire spectrum of CDF data and then redistribution of the data in time, to adjust the spatial consistency against observations. The methodology is tested on surface pressure and wind data derived from selected global climate models.